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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,745	11/14/2002	Nenad Rijavec	BLD920020007	7517

56989 7590 02/14/2011

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EXAMINER	
HUNTSINGER, PETER K	
ART UNIT	PAPER NUMBER
2625	

NOTIFICATION DATE	DELIVERY MODE
02/14/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/065,745	RIJAVEC, NENAD	
	Examiner	Art Unit	
	Peter K. Huntsinger	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 December 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-4,6-9 and 14-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-4,6-9 and 14-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 12/13/10 have been fully considered but they are not persuasive.

The Applicant argues on page 9 of the response in essence that:

The cited prior art does not disclose that the RIP's pass processed data to multiple print head drivers over multiple bidirectional networks.

a. Motamed '050 discloses that each RIP may be connected to a different, dedicated print engine (col. 7, lines 26-35). Motamed '050 further discloses that the RIPs are connected to the print engines through one or more video print machines 64 via a high speed interconnect bus 74 (col. 7, lines 26-35). Accordingly, each RIP can be connected to a different, dedicated video print machine.

The Applicant argues on page 9 of the response in essence that:

The cited prior art does not disclose that some of the personal computers are commercial, off the shelf PCs.

b. Motamed '050 discloses that any standard hardware or software RIP may be used in connection with the various modules which comprise the invention (col. 6, lines 45-59), and that a hardware RIP is a computer which is attached to an output device and which is dedicated to translating digital image data for

output (col. 1, lines 38-50). Therefore, the standard computer disclosed by Motamed '050 can be considered a commercial, off the shelf PC.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 3, 14-17, 19-21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barry Patent 6,825,943 in view of Motamed Patent 6,327,050 and Tannenbaum Patent 5,434,967.

Referring to **claim 3**, Motamed '050 discloses wherein each of said RIPs converts said work units from a form communicated as a print data stream to data signals over one of said RIP-to-head driver networks to a print head driver (col. 4, lines 30-52, the processors complete the RIP step on their assigned pages).

Referring to **claim 14**, Barry '943 discloses an apparatus comprising:

a pipeline of processors processing print control data and having:

one processor being a sequencer receiving a print data stream at an input port (instruction operator for job file 114 of Fig. 1a), said sequencer monitoring data flows among the pipelined processors and parsing a print data stream into local data portions related to individual pages (col. 4, lines 34-38) and global state data portions related to characteristics shared across a plurality of pages (col. 4, lines 26-30), said sequencer

packaging together parsed page local and global state data portions as work units (col. 4, lines 34-40);

a plurality of raster image processors (RIPS) directly connected to said sequencer on one or more sequencer-to-page networks with said sequencer (col. 4, lines 34-40), each RIP receiving work units from said sequencer, said raster image processors processing work in parallel and generating data signals (Rip engines 150, 152, and 154 of Fig. 1b, col. 1, lines 41-50); and

Barry '943 does not disclose expressly a plurality of print head drivers.

Motamed '050 discloses a plurality of said processors providing a plurality of print head drivers communicating over a plurality RIP-to-head driver networks (col. 7, lines 26-35, each RIP may be connected to a different, dedicated print engine) with said plurality of RIPs as directed by said sequencer, said sequencer synchronizing print jobs traversing said pipeline, each of said print head drivers receiving control data signal controlling application of colorant to a sheet by a print head (col. 7, lines 26-35, the RIPs are connected to one or more video print machines 64 via a high speed interconnect bus 74. The video print machine provides output to a print engine 75).

At the time of the invention, it would have obvious to a person of ordinary skill in the art to utilize a plurality of print head drivers. The motivation for doing so would have been to increase the print processing speed.

Barry '943 does not disclose expressly wherein said one or more sequencer-to-page networks and said one or more RIP-to-head driver networks are bidirectional networks.

Tannenbaum '967 discloses wherein said one or more sequencer-to-page networks and said one or more RIP-to-head driver networks are bidirectional networks (col. 3, lines 1-20, rasterizer logic is connected to the bit block transfer node such that bidirectional transfer of data between the rasterizer logic and the bit block transfer node is allowed).

At the time of the invention, it would have obvious to a person of ordinary skill in the art to utilize a bidirectional network. The motivation for doing so would have been to allow monitoring the status of processing devices in the system. Therefore, it would have been obvious to combine Motamed '050 and Tannenbaum '967 with Barry '943 to obtain the invention as specified in claim 14.

Referring to **claim 15**, Barry '943 discloses a plurality of RIPs, but does not disclose expressly wherein the RIPS are computers.

Motamed '050 discloses wherein a plurality of said processors in said pipeline are stand alone computers (col. 6, lines 45-59, additional RIPS may be added to the system while the system is in operation without interruption in normal system operation).

At the time of the invention, it would have obvious to a person of ordinary skill in the art to utilize a plurality of personal computer RIPS. The motivation for doing so would have been to provide a system that supports a hot pluggable interconnect. Therefore, it would have been obvious to combine Motamed '050 with Barry '943 to obtain the invention as specified in claim 15.

Referring to **claim 16**, Motamed '050 discloses wherein said plurality of processors includes a plurality of personal computers (col. 6, lines 45-59, any standard

hardware or software RIP may be used in connection with the various modules which comprise the invention) (col. 1, lines 38-50, a hardware RIP is a computer which is attached to an output device and which is dedicated to translating digital image data for output).

Referring to **claim 17**, Motamed '050 discloses wherein said plurality of RIPS includes a plurality of commercial, off the shelf (COTS) personal computers operating as RIPs (col. 6, lines 45-59, any standard hardware or software RIP may be used in connection with the various modules which comprise the invention) (col. 1, lines 38-50, a hardware RIP is a computer which is attached to an output device and which is dedicated to translating digital image data for output).

Referring to **claim 19**, Motamed '050 discloses wherein each of said plurality of RIPs is a personal computer, (col. 6, lines 45-59, any standard hardware or software RIP may be used in connection with the various modules which comprise the invention) (col. 1, lines 38-50, a hardware RIP is a computer which is attached to an output device and which is dedicated to translating digital image data for output), the number of RIPs being adjusted by adding and removing RIP personal computers to/from said one or more sequencer-to-page networks and said plurality of RIP-to-head driver networks (col. 6, lines 45-59, additional RIPS may be added to the system while the system is in operation without interruption in normal system operation).

Referring to **claim 20**, Barry '943 discloses an apparatus comprising:

a pipeline of computers processing print control data and connected between a print server and a printer and processing print control data from said print server, and said pipeline of computers having:

a sequencer computer (instruction operator for job file 114 of Fig. 1a) receiving a print data stream at an input port, said sequencer computer monitoring data flows among the pipelined computer and parsing a print data stream into local data portions related to individual pages (col. 4, lines 34-38) and global state data portions related to characteristics shared across a plurality of pages (col. 4, lines 26-30), said sequencer packaging together parsed page local and global state data portions as work units (col. 5, lines 8-13);

a plurality of raster image processors (RIPs) directly connected to said sequencer computer on one or more sequencer-to-page networks with said sequencer computer (col. 4, lines 34-40), wherein said plurality of RIPs each receiving work units from said sequencer, said plurality of RIPs processing work units in parallel and generating data signals (Rip engines 150, 152, and 154 of Fig. 1b, col. 1, lines 41-50).

Barry ‘943 does not disclose expressly wherein the RIPS are personal computers or utilizing a plurality of print head drivers.

Motamed ‘050 discloses wherein said plurality of RIPS is a plurality of personal computers (col. 6, lines 45-59, any standard hardware or software RIP may be used in connection with the various modules which comprise the invention) (col. 1, lines 38-50, a hardware RIP is a computer which is attached to an output device and which is dedicated to translating digital image data for output);

a plurality of print head driver computers communicating over a plurality of RIP-to-head driver networks (col. 7, lines 26-35, each RIP may be connected to a different, dedicated print engine) with said plurality of RIPs as directed by said sequencer computer, said sequencer computer synchronizing print jobs traversing said pipeline, each of said print head drivers receiving control data signal controlling application of colorant to a sheet by a print head (col. 7, lines 26-35, the RIPs are connected to one or more video print machines 64 via a high speed interconnect bus 74. The video print machine provides output to a print engine 75);

wherein a plurality of said computers are stand alone computers (col. 6, lines 45-59, additional RIPS may be added to the system while the system is in operation without interruption in normal system operation).

At the time of the invention, it would have obvious to a person of ordinary skill in the art to utilize a plurality of personal computer RIPS and to utilize a plurality of print head drivers. The motivation for doing so would have been to provide a system that supports a hot pluggable interconnect and to increase the print processing speed.

Barry ‘943 does not disclose expressly wherein said one or more sequencer-to-page networks and said one or more RIP-to-head driver networks are bidirectional networks.

Tannenbaum ‘967 discloses wherein said one or more sequencer-to-page networks and said one or more RIP-to-head driver networks are bidirectional networks (col. 3, lines 1-20, rasterizer logic is connected to the bit block transfer node such that

bidirectional transfer of data between the rasterizer logic and the bit block transfer node is allowed).

At the time of the invention, it would have obvious to a person of ordinary skill in the art to utilize a bidirectional network. The motivation for doing so would have been to allow monitoring the status of processing devices in the system. Therefore, it would have been obvious to combine Motamed '050 and Tannenbaum '967 with Barry '943 to obtain the invention as specified in claim 20.

Referring to **claim 21**, Motamed '050 discloses wherein said plurality of computers comprises a plurality of commercial, off the shelf (COTS) personal computers (col. 6, lines 45-59, any standard hardware or software RIP may be used in connection with the various modules which comprise the invention) (col. 1, lines 38-50, a hardware RIP is a computer which is attached to an output device and which is dedicated to translating digital image data for output).

Referring to **claim 23**, Motamed '050 discloses wherein each of said plurality of RIPs is a COTS personal computer, (col. 6, lines 45-59, any standard hardware or software RIP may be used in connection with the various modules which comprise the invention) (col. 1, lines 38-50, a hardware RIP is a computer which is attached to an output device and which is dedicated to translating digital image data for output), the number of RIPs being adjusted by adding and removing RIP personal computers to/from said one or more sequencer-to-page networks and said plurality of RIP-to-head driver networks (col. 6, lines 45-59, additional RIPS may be added to the system while the system is in operation without interruption in normal system operation).

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barry Patent 6,825,943, Motamed Patent 6,327,050 and Tannenbaum Patent 5,434,967 as applied to claim 18 above, and further in view of Noyes Patent 6,364,452.

Referring to **claim 2**, Barry '943 discloses said sequencer communicating work units to said RIPS, but does not disclose expressly queuing work units.

Motamed '050 discloses wherein said sequencer queues said work units to be communicated to said RIPs computer (col. 5, lines 39-42 the system can receive jobs over network or media to one smart queue and automatically assign the job to the optimal RIP(s) and print engine(s), while sending the client up to the minute status) and further wherein individual ones of said raster image processors draw from said queued work units related to an individual page generated data signals are communicated over said plurality of RIP-to-head driver networks to a print head driver (col. 7, lines 26-35, the RIPs are connected to one or more video print machines 64 via a high speed interconnect bus 74. The video print machine provides output to a print engine 75) and wherein each color print head driver is on a dedicated print head driver network and a black print head are on a dedicated print head driver network (col. 7, lines 26-35, each RIP may be connected to a different, dedicated print engine).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to utilize a print stream queue. The motivation for doing so would have been to increase the flexibility of scheduling rasterization.

Barry '943 does not disclose expressly using a pair of black head drivers.

Noyes '452 discloses using a pair of black head drivers (col. 56, lines 45-58, possible combinations of print heads include using two black ink print heads).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use two black ink print heads. The motivation for doing so would have been to increase speed of printing black print data. Therefore, it would have been obvious to combine Motamed '050 and Noyes '452 with Barry '943 to obtain the invention as specified in claim 2.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barry Patent 6,825,943, Motamed Patent 6,327,050 and Tannenbaum Patent 5,434,967 as applied to claim 3 above, and further in view of Hohensee Patent 5,946,460.

Referring to **claim 4**, Motamed '050 discloses wherein each print head driver is on a dedicated print head driver network (col. 7, lines 26-35, each RIP may be connected to a different, dedicated print engine).

Barry '943 discloses raster image processors but does not disclose expressly converting into a variable number of portions depending on whether a page is to be blank, single colored, or multiple colored.

Hohensee '460 discloses each of said raster image processors converts data from a form communicated as a print data stream into a variable number of portions depending upon whether an individual page is to be blank or to be printed with a single color or to be printed with multiple colors (col. 4, lines 53-60).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to utilize a rasterizer to convert into a variable number of portions depending on whether a page is to be blank, single colored, or multiple colored. The motivation for doing so would have been to produce a separate bitmap for each color of ink required to print the page. Therefore, it would have been obvious to combine Hohensee '460 with Barry '943 to obtain the invention as specified in claim 4.

6. Claims 6, 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barry Patent 6,825,943 in view of Motamed Patent 6,327,050.

Referring to **claims 6 and 9**, Barry '943 discloses a method comprising the steps of:

receiving at a computer a print data stream from a print server and parsing the stream into local (col. 4, lines 34-38) and global portions (col. 4, lines 26-30);

packaging together parsed local and global print stream data portions (col. 5, lines 8-13); and

processing a plurality of communicated packaged print stream data portions in parallel to generate print head driving data signals (col. 2, lines 9-20, rendering each select portion of the print job with the plurality of RIPS in parallel).

Barry '943 does not disclose expressly queuing print stream data portions, or a plurality of personal computer RIPS.

Motamed '050 discloses queuing packaged print stream data portions in said computer (col. 5, lines 39-42 the system can receive jobs over network or media to one

smart queue and automatically assign the job to the optimal RIP(s) and print engine(s), while sending the client up to the minute status);

communicating queued packaged print stream data portions directly over a network to a plurality of personal computers operating as raster image processors (RIPs) (col. 6, lines 45-59, any standard hardware or software RIP may be used in connection with the various modules which comprise the invention) (col. 1, lines 38-50, a hardware RIP is a computer which is attached to an output device and which is dedicated to translating digital image data for output);

processing a plurality of communicated packaged print stream data portions in parallel in said plurality of personal computers to generate print head driving data signals (col. 4, lines 30-52, the processors complete the RIP step on their assigned pages); and

communicating the generated print head driving data signals from each of said plurality of personal computers to one or more of a plurality of print head driver computers, said print head driver computers driving the print heads of a printer (col. 7, lines 26-35, the RIPs are connected to one or more video print machines 64 via a high speed interconnect bus 74. The video print machine provides output to a print engine 75).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to utilize a print stream queue, and to utilize a plurality of personal computer RIPS. The motivation for doing so would have been to increase the flexibility of scheduling rasterization, and provide a system that supports a hot pluggable

interconnect. Therefore, it would have been obvious to combine Motamed '050 with Barry '943 to obtain the invention as specified in claims 6 and 9.

Referring to **claim 7**, Barry '943 discloses wherein said step of packaging print stream data portions comprises packaging portions applicable to individual pages (col. 7, lines 34-36).

Motamed '050 discloses wherein each print head driver is on a dedicated print head driver network (col. 7, lines 26-35, each RIP may be connected to a different, dedicated print engine).

7. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barry Patent 6,825,943 and Motamed Patent 6,327,050 as applied to claim 6 above, and further in view of Noyes Patent 6,364,452.

Barry '943 discloses wherein said step of processing comprises generating bitmap data signals (col. 10, lines 59-60).

Motamed '050 discloses wherein color bitmaps are communicated for each color on a dedicated print head driver network and black bitmaps are communicated on a dedicated print head driver network (col. 7, lines 26-35, each RIP may be connected to a different, dedicated print engine).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to utilize a print stream queue. The motivation for doing so would have been to increase the flexibility of scheduling rasterization.

Barry '943 does not disclose expressly using a pair of black head drivers.

Noyes '452 discloses using a pair of black head drivers (col. 56, lines 45-58, possible combinations of print heads include using two black ink print heads).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use two black ink print heads. The motivation for doing so would have been to increase speed of printing black print data. Therefore, it would have been obvious to combine Motamed '050 and Noyes '452 with Barry '943 to obtain the invention as specified in claim 8.

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barry Patent 6,825,943, Motamed Patent 6,327,050 and Tannenbaum Patent 5,434,967 as applied to claim 17 above, and further in view of Hewitt Patent 7,016,061 and Manglapus Patent 6,219,151.

Referring to **claim 18**, Barry '943 discloses wherein said sequencer coordinates print jobs in said pipeline, but does not disclose expressly wherein said sequencer maintains a queue.

Motamed '050 discloses wherein said sequencer maintains a queue of said work units (col. 5, lines 39-42 the system can receive jobs over network or media to one smart queue and automatically assign the job to the optimal RIP(s) and print engine(s), while sending the client up to the minute status), and is a higher performance computer than any of said plurality of COTS personal computers (col. 6, lines 45-59, any standard hardware or software RIP may be used in connection with the various modules which comprise the invention) (col. 1, lines 38-50, a hardware RIP is a computer which is

attached to an output device and which is dedicated to translating digital image data for output) (col. 5, lines 15-61, adaptive scheduler handles multiple function as opposed to the RIPs), said RIPS accessing said queue and obtaining one or more work unit for processing (col. 5, lines 39-42 the system can receive jobs over network or media to one smart queue and automatically assign the job to the optimal RIP(s) and print engine(s), while sending the client up to the minute status).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to utilize a print stream queue. The motivation for doing so would have been to increase the flexibility of scheduling rasterization.

Barry '943 does not disclose expressly wherein said sequencer selectively acts as one or more RIPs.

Hewitt '061 discloses wherein said sequencer acts as one or more RIPs (col. 5, lines 25-39, in the event the RIP control module 32 determines that the print job should be processed at the host computer 12, the print job PDL file is passed to the RIP engine 22, processed and then transmitted directly to the print engine 26).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art for a computer to selectively act as a rasterizer. The motivation for doing so would have been to increase the speed of image rasterization.

Barry '943 does not disclose expressly wherein said RIPs request work when ready.

Manglapus '151 discloses wherein a processor requests work when ready (col. 5, lines 52-65, in a print pulling network the network controller 29 may then transmit one or

more data packets to request retrieval of the print data from the network memory address, and receive data packets having the print data in response to the request).

At the time of the invention, it would have obvious to a person of ordinary skill in the art to utilize print pulling of data. The motivation for doing so would have been to increase the efficiency and reliability of the printing system. Therefore, it would have been obvious to combine Motamed '050, Hewitt '061 and Manglapus '151 with Barry '943 to obtain the invention as specified in claim 18.

9. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barry Patent 6,825,943, Motamed Patent 6,327,050 and Tannenbaum Patent 5,434,967 as applied to claim 21 above, and further in view of Manglapus Patent 6,219,151.

Referring to **claim 22**, Barry '943 discloses wherein said sequencer coordinates print jobs in said pipeline, but does not disclose expressly wherein said sequencer maintains a queue.

Motamed '050 discloses wherein said sequencer maintains a queue of said work units (col. 5, lines 39-42 the system can receive jobs over network or media to one smart queue and automatically assign the job to the optimal RIP(s) and print engine(s), while sending the client up to the minute status), and is a higher performance computer than any of said plurality of COTS personal computers (col. 6, lines 45-59, any standard hardware or software RIP may be used in connection with the various modules which comprise the invention) (col. 1, lines 38-50, a hardware RIP is a computer which is attached to an output device and which is dedicated to translating digital image data for

output) (col. 5, lines 15-61, adaptive scheduler handles multiple function as opposed to the RIPs), said RIPS accessing said queue and obtaining one or more work unit for processing (col. 5, lines 39-42 the system can receive jobs over network or media to one smart queue and automatically assign the job to the optimal RIP(s) and print engine(s), while sending the client up to the minute status).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to utilize a print stream queue. The motivation for doing so would have been to increase the flexibility of scheduling rasterization.

Barry '943 does not disclose expressly wherein said RIPs request work when ready.

Manglapus '151 discloses wherein a processor requests work when ready (col. 5, lines 52-65, in a print pulling network the network controller 29 may then transmit one or more data packets to request retrieval of the print data from the network memory address, and receive data packets having the print data in response to the request).

At the time of the invention, it would have obvious to a person of ordinary skill in the art to utilize print pulling of data. The motivation for doing so would have been to increase the efficiency and reliability of the printing system. Therefore, it would have been obvious to combine Motamed '050 and Manglapus '151 with Barry '943 to obtain the invention as specified in claim 22.

10. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Barry Patent 6,825,943, Motamed Patent 6,327,050 and Tannenbaum Patent 5,434,967 as applied to claim 21 above, and further in view of Hewitt Patent 7,016,061.

Referring to **claim 24**, Motamed '050 discloses wherein each print head driver is on a dedicated print head driver network (col. 7, lines 26-35, each RIP may be connected to a different, dedicated print engine).

Barry '943 discloses wherein said sequencer coordinates print jobs in said pipeline, but does not disclose expressly wherein said sequencer selectively acts as one or more RIPs.

Hewitt '061 discloses wherein said sequencer acts as one or more RIPs (col. 5, lines 25-39, in the event the RIP control module 32 determines that the print job should be processed at the host computer 12, the print job PDL file is passed to the RIP engine 22, processed and then transmitted directly to the print engine 26).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art for a computer to selectively act as a rasterizer. The motivation for doing so would have been to increase the speed of image rasterization. Therefore, it would have been obvious to combine Hewitt '061 with Barry '943 to obtain the invention as specified in claim 24.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter K. Huntsinger whose telephone number is (571)272-7435. The examiner can normally be reached on 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on (571)-272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Peter K. Huntsinger/
Examiner, Art Unit 2625

/David K Moore/
Supervisory Patent Examiner, Art Unit 2625